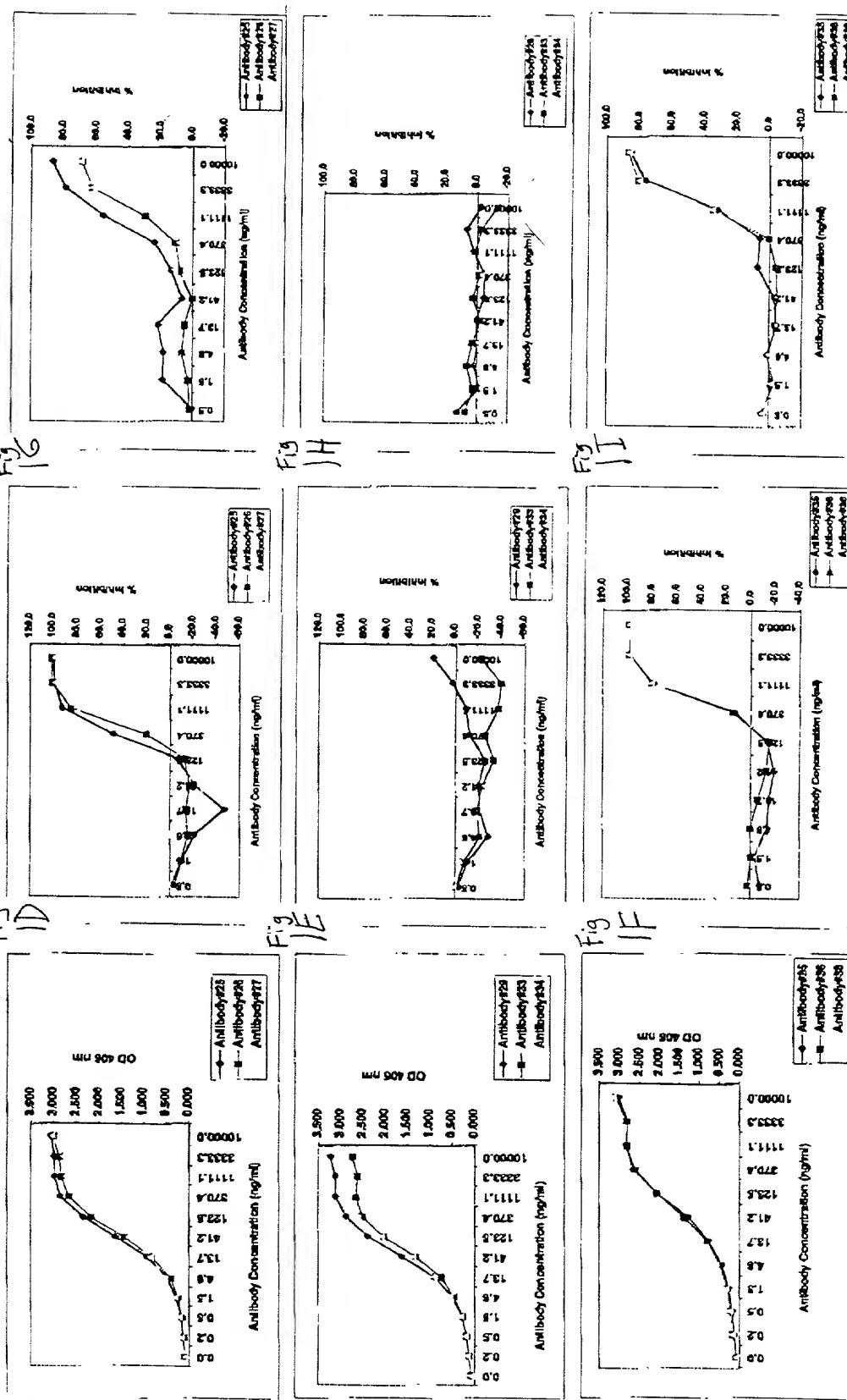


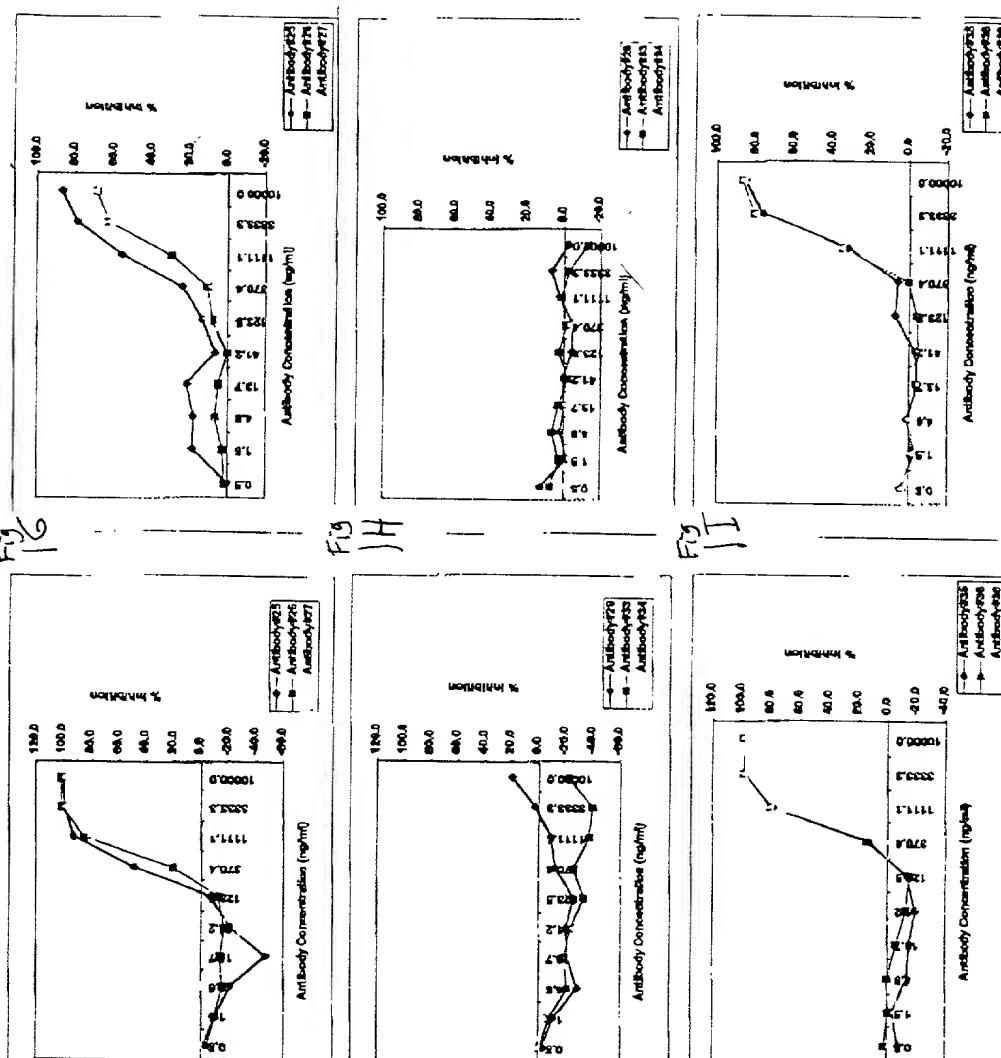
Binding of antibodies to CTLA-4

Fig. 1A



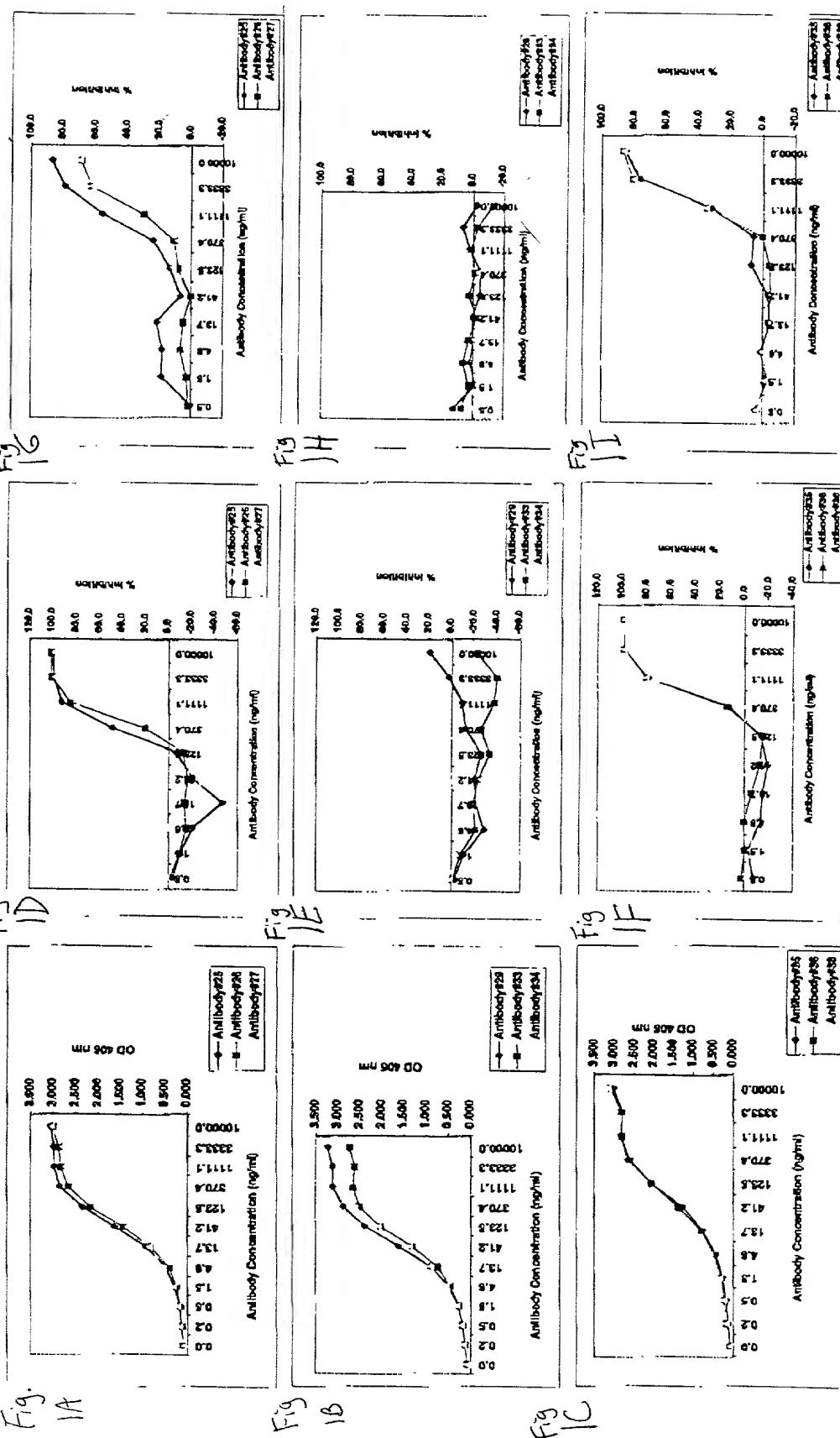
Blockage of CD86 binding

Fig. 1D



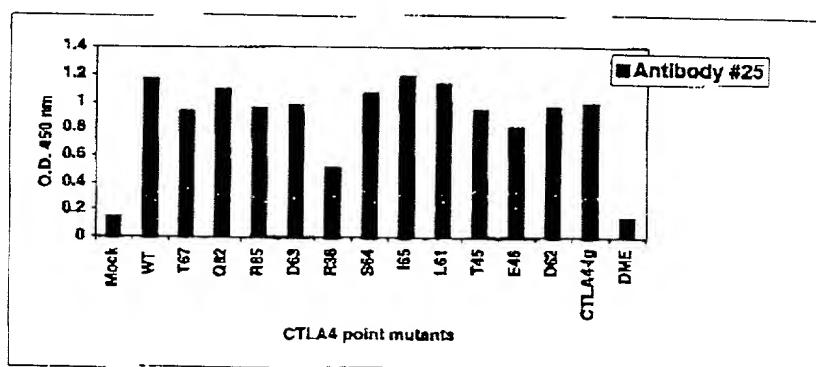
Blockage of CD80 binding

Fig. 1E

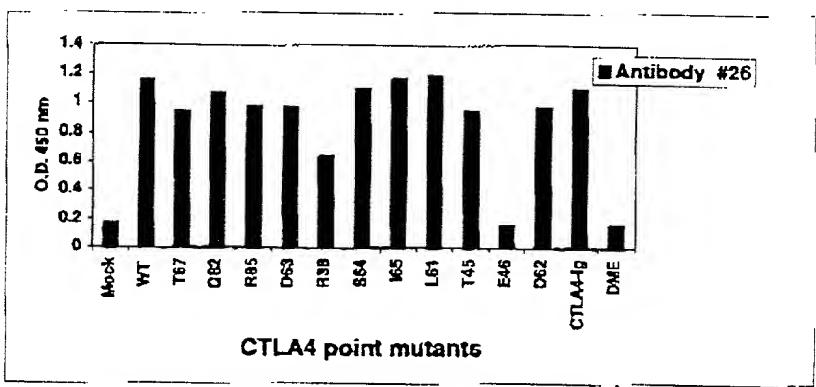


Anti-CTLA4 Abs #25, #26, and #29 defined three distinct epitopes on CTLA4

CTLA4 point mutant	Antibody #25
Mock	0.165
WT	1.17
T67	0.935
Q82	1.1
R85	0.96
D63	0.986
R38	0.52
S64	1.07
I65	1.19
L61	1.14
T45	0.948
E46	0.811
D62	0.985
CTLA4-Ig	0.998
DME	0.14



CTLA4 point mutant	Antibody #26
Mock	0.174
WT	1.16
T67	0.944
Q82	1.07
R85	0.976
D63	0.979
R38	0.636
S64	1.1
I65	1.17
L61	1.19
T45	0.948
E46	0.16
D62	0.974
CTLA4-Ig	1.1
DME	0.163



CTLA4 point mutant	Antibody #29
Mock	0.094
WT	0.82
T67	0.625
Q82	0.784
R85	0.096
D63	0.719
R38	0.364
S64	0.753
I65	0.801
L61	0.819
T45	0.696
E46	0.809
D62	0.573
CTLA4-Ig	0.887
DME	0.081

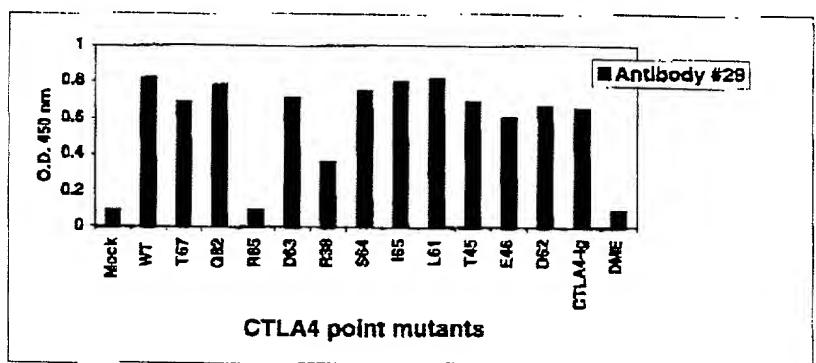


Fig 3A Proliferation

	media	Ab #25	Ab #26	Ab#27	Ab#28	Ab#33	Ab#34	Ab#35	Ab#36	Ab #38
Donor 1	54871	16589	33928	49492	234	928	45524	58203	72358	50865
Donor 2	102159	32784.3	58736.2	79098.2	1891.3	5427.4	78391.9	91920.2	116454.6	88937.9

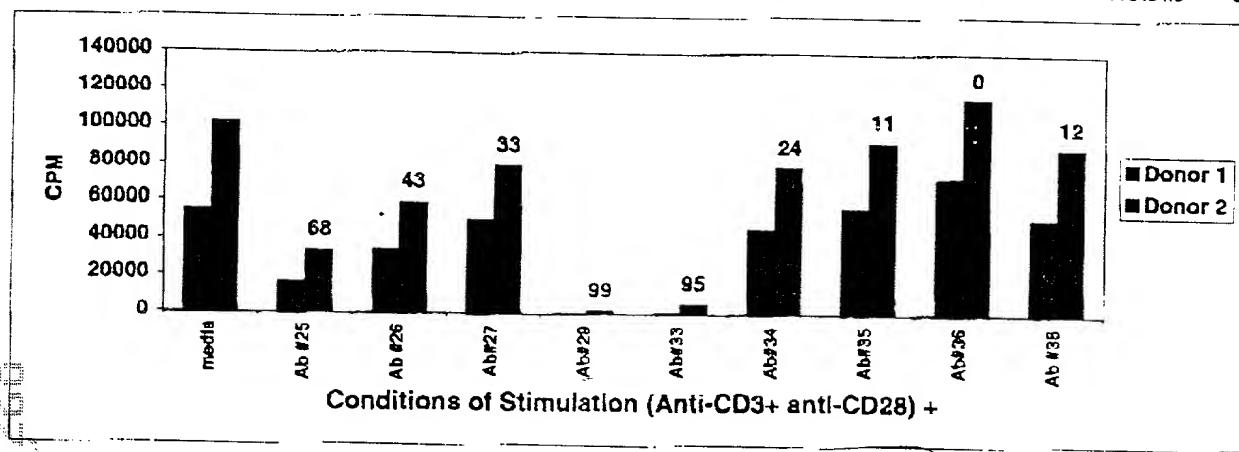


Fig 3B IL-2 Production

	media	Ab #25	Ab #26	Ab#27	Ab#29	Ab#33	Ab#34	Ab#35	Ab#36	Ab #38
	2125.3	330.2	182.5	231.7	60.8	462.3	573.7	305.7	617.7	672.1

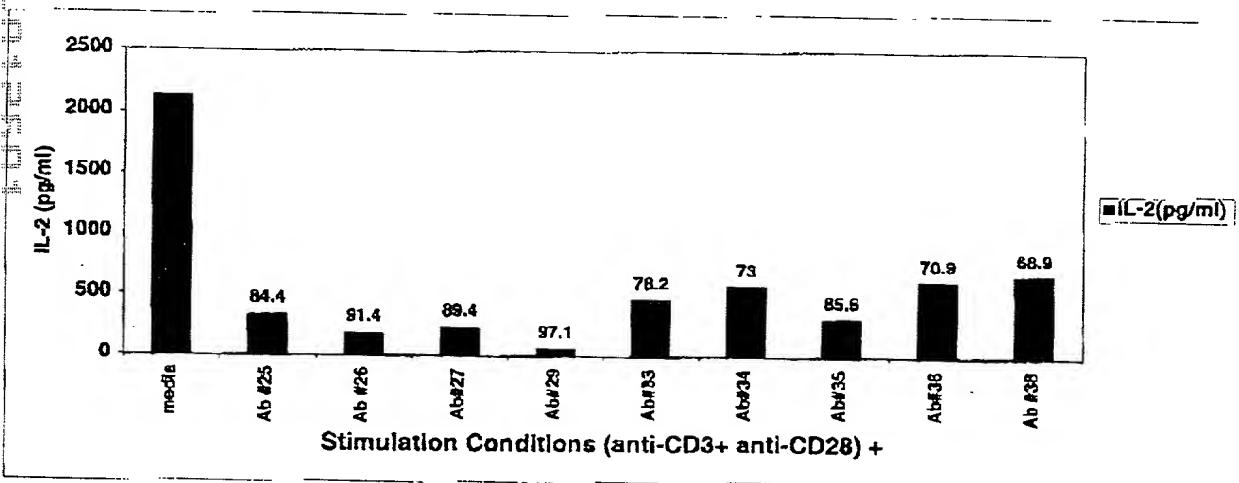


Fig. 4A Proliferation

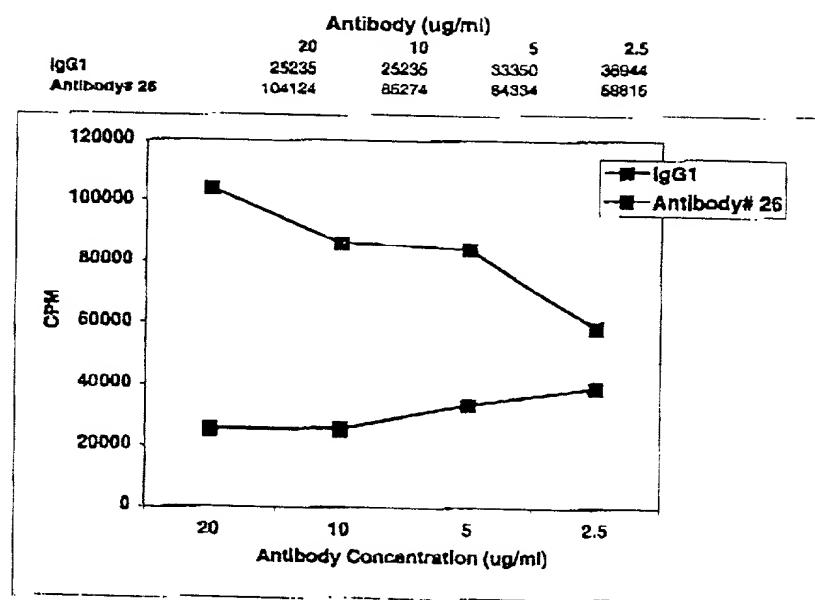
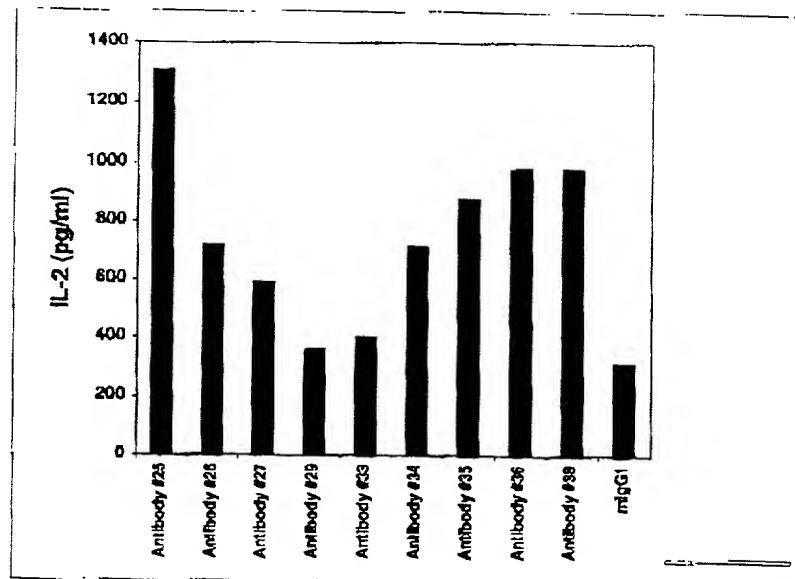


Fig. 4B IL-2 Production

	IL-2 (pg/ml)
Antibody #25	1310
Antibody #26	720
Antibody #27	594
Antibody #29	358
Antibody #33	400
Antibody #34	715
Antibody #35	875
Antibody #36	982
Antibody #38	982
nmIgG1	917



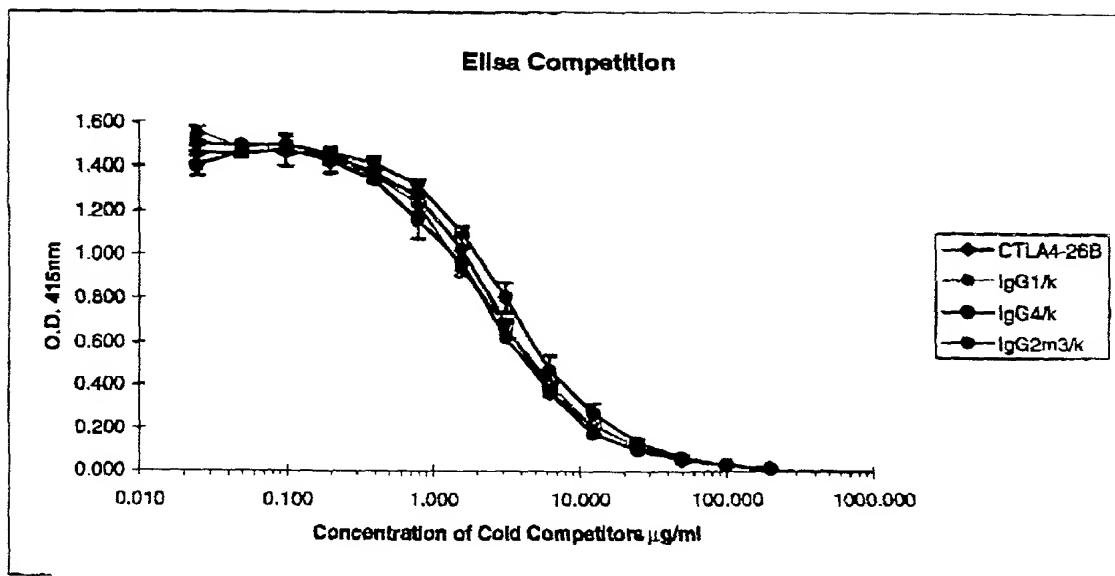


Figure 5

FACS Competition Using FITC-Labeled CTLA4-26B with Cold CTLA4-26B and Humanized IgG1/κ

Name	Cell Line	Primary Ab	Competitor
	CHO.CTLA4	FITC-CTLA4-26B	Cold CTLA4-26B
052199.001		125 ng	2000 ng
052199.002			1000 ng
052199.003			500 ng
052199.004			250 ng
052199.005			100 ng
052199.006			IgG1/κ
052199.007			2000 ng
052199.008			1000 ng
052199.009			500 ng
052199.010			250 ng
052199.016			100 ng
052199.017	CHO.B7.1	none	none
052199.018		125 ng	none
052199.019		none	none

Fig
6A

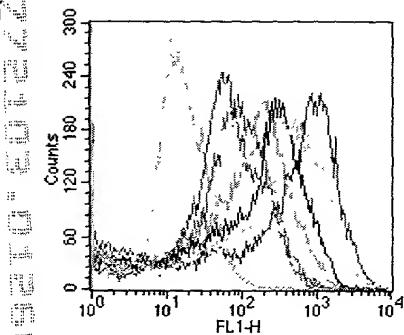


Fig
6B

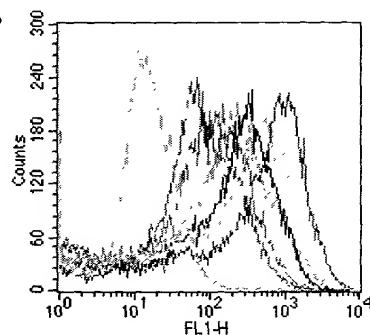
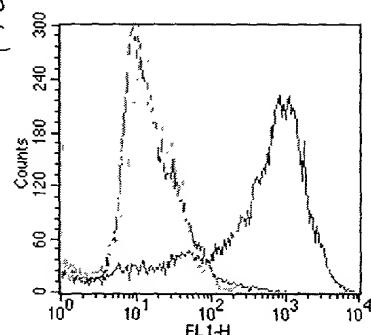


Fig
6C

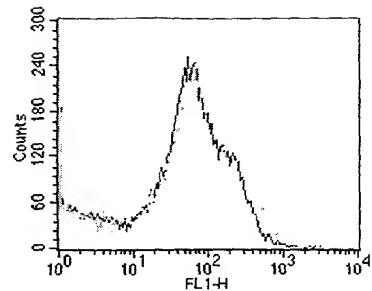


Key	Name	Parameter	Gate
—	052199.016	FL1-H	No Gate
—	052199.017	FL1-H	No Gate
—	052199.001	FL1-H	No Gate
—	052199.002	FL1-H	No Gate
—	052199.003	FL1-H	No Gate
—	052199.004	FL1-H	No Gate
—	052199.005	FL1-H	No Gate

Key	Name	Parameter	Gate
—	052199.016	FL1-H	No Gate
—	052199.017	FL1-H	No Gate
—	052199.006	FL1-H	No Gate
—	052199.007	FL1-H	No Gate
—	052199.008	FL1-H	No Gate
—	052199.009	FL1-H	No Gate
—	052199.010	FL1-H	No Gate

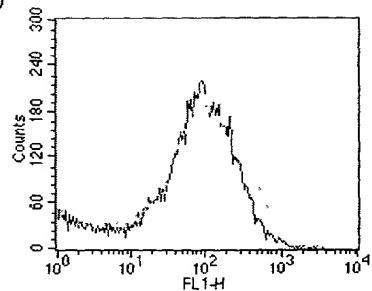
Key	Name	Parameter	Gate
—	052199.016	FL1-H	No Gate
—	052199.017	FL1-H	No Gate
—	052199.018	FL1-H	No Gate
—	052199.019	FL1-H	No Gate

Fig.
7A



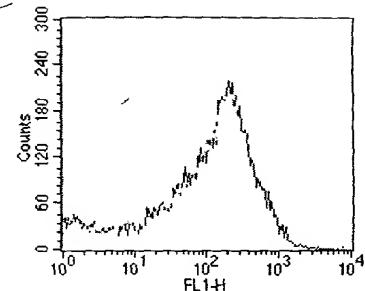
Key	Name	Parameter	Gate
—	052199.001	FL1-H	No Gate
—	052199.006	FL1-H	No Gate

Fig.
7B



Key	Name	Parameter	Gate
—	052199.002	FL1-H	No Gate
—	052199.007	FL1-H	No Gate

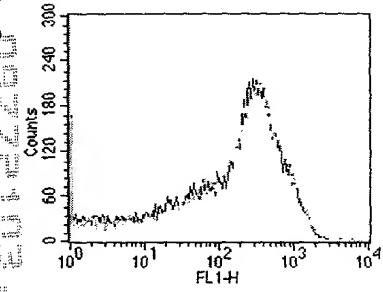
Fig.
7C



Key	Name	Parameter	Gate
—	052199.003	FL1-H	No Gate
—	052199.008	FL1-H	No Gate

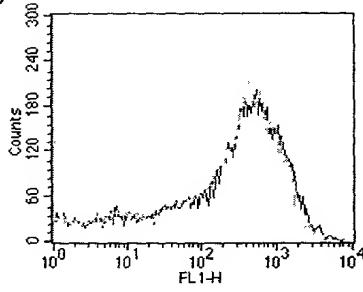
Fig

7D



Key	Name	Parameter	Gate
—	052199.004	FL1-H	No Gate
—	052199.009	FL1-H	No Gate

Fig
7E



Key	Name	Parameter	Gate
—	052199.005	FL1-H	No Gate
—	052199.010	FL1-H	No Gate

Figure 7

Fig 8A

Jurkat CTLA4 NEGATIVE cell line

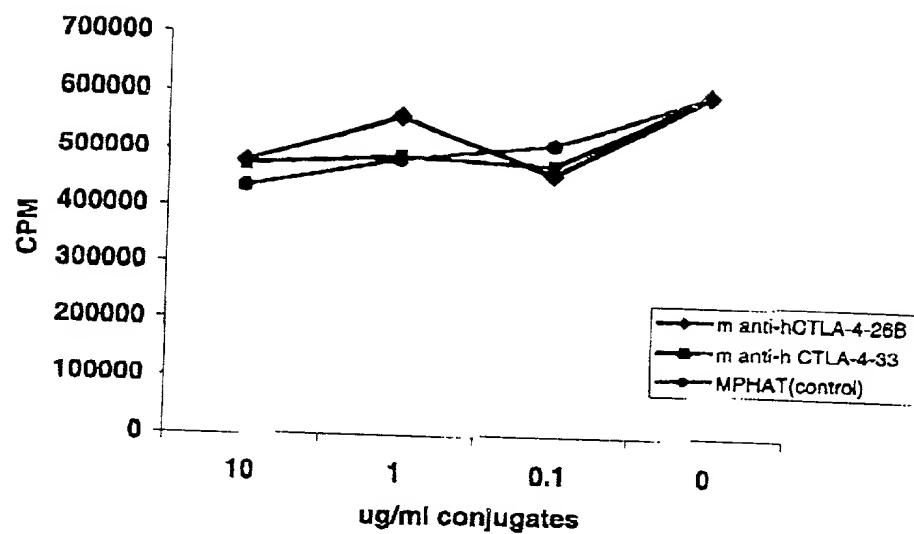
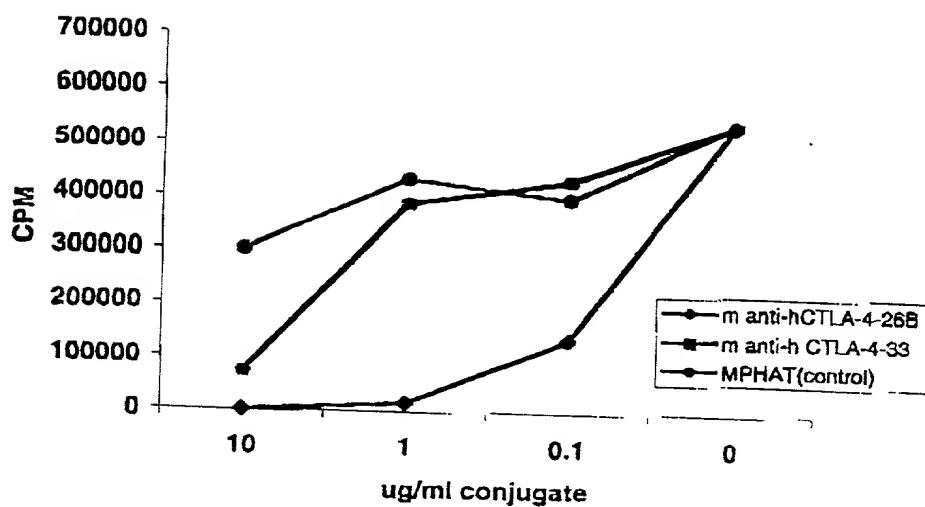


Fig 8B

Jurkat CTLA-4 POSITIVE cell line



HuCTLA4 - V_k

TATATCTAGACCACCATGGATTTCAAGTGCAGATCTCAGCTCCTGCTAATCAGTGCC
M D F Q V Q I F S F L L I S A

TCAGTCATACTGTCCAGAGGAGATATCCAGATGACCCAGTCTCCATCCTCCATCCGCA
S V I L S R G D I Q M T Q S P S S L S A

TCTGTTGGGGACAGGGTCACCATAACCTGTAGTGCCACCTCAAGTATAACTACATGTCC
S V G D R V T I T C S A T S S I T Y M S

TGGTATCAGCAGAACGCCAGGAAAGGCTCCCAAGCTTCTGATTTATGACACATCCAACCTG
W Y Q Q K P G K A P K L L I Y D T S N L

GCTTCTGGGTACCTAGCCGCTTCAGTGGCAGTGGGTCTGGGACCGACTACACACTCACA
A S G V P S R F S G S G S G T D Y T L T

ATCAGCAGCCTGCAGCCAGAAGATTTGCCACTTATTACTGCCAGCAGTGGAGTAGTTAC
I S S L Q P E D F A T Y Y C Q Q W S S Y

CCGCTCACGTTGGAGGGACCAAGGTTGAGATAAAACGTAAGTAGAATCCAAAGTCT
P L T F G G G T K V E I K

AGATATA

Figure 9

HuCTLA4 - VH

TATATCTAGACCACCATGGCTGTCCTGGTGCTGTTCTCTGCCTGGTGCATTCCAAGC
M A V L V L F L C L V A F P S

TGTGTCCTGTCCCAGGTGCAGCTGCAAGAGTCAGGACCTGGCCTGGTGAAGCCCTCACAG
C V L S Q V Q L Q E S G P G L V K P S Q

ACACTGTCCCTGACTTGCACTGTCTCTGGGTTTCATTAACCTCATATGGTGTATATTGG
T L S L T C T V S G F S L T S Y G V Y W

GTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGTACC
V R Q P P G K G L E W L G V I W A G G T

ACAAATTATAATTGGCTCTCATGTCCAGACTGACAATCAGCAAAGACACATCCAAGAAC
T N Y N S A L M S R L T I S K D T S K N

CAAGTTCCCTAAACTCAGCAGTGTGACTGCAGCGGACACAGCCGTCTACTACTGTGCC
Q V S L K L S S V T A A D T A V Y Y C A

CGAGGCCCGCACGCTATGATGAAGAGAGGCTATGCTATGGACTACTGGGGACAAGGA
R G P P H A M M K R G Y A M D Y W G Q G

ACCCTAGTCACAGTCTCCTCAGGTGAGTCCTAAACCTCTAGATATA
T L V T V S S

Figure 1D

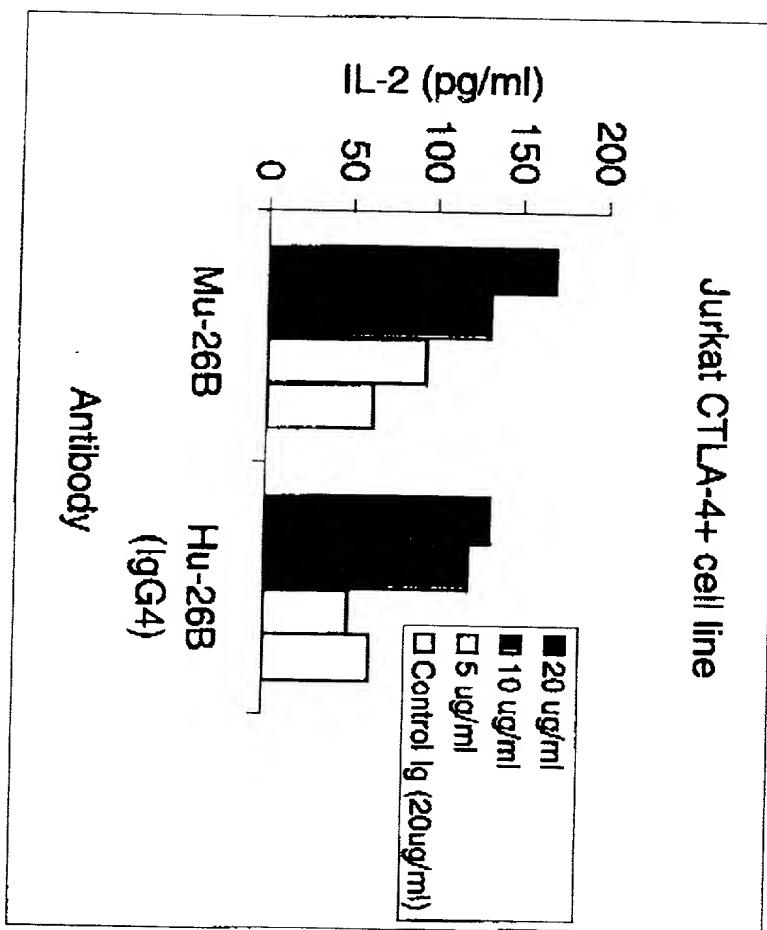


Figure 11